



**US Army Corps  
of Engineers**

# REGULATORY GUIDANCE LETTER

**No. 01-1**

**Date: 31 October 2001**

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**SUBJECT:** Guidance for the Establishment and Maintenance of Compensatory Mitigation Projects Under the Corps Regulatory Program Pursuant to Section 404(a) of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899

## **1. Purpose and applicability**

**a. Purpose.** Corps permits issued under Section 404(a) of the Clean Water Act or Section 10 of the Rivers and Harbors Act of 1899 routinely contain conditions that relate to compensatory mitigation for resources that are going to be adversely affected or lost as a result of a permitted activity. The Corps is strongly committed to protection of the overall aquatic environment on a watershed basis, including fully mitigating authorized impacts to all aquatic resources, including wetlands. As discussed in the National Research Council (NRC) report, *Compensating for Wetland Losses Under the Clean Water Act*, (June, 2001), the Corps must increase the effectiveness and compliance of mitigation required for authorized impacts to the aquatic environment, including wetlands. This guidance letter provides direction concerning factors that affect compensatory mitigation success in a variety of contexts. This guidance adopts definitions that were developed for use in accounting for the types of mitigation used in Federal efforts to meet the national no overall net loss policy and to account for projects designed solely to increase the nation's wetland base. These terms were published on the U.S. Fish and Wildlife Service web page in July 2000, for use in reporting gains and losses by Federal resource management agencies.

The guidance also adopts the use of the terms "credit" and "debit". Acres have traditionally been used as the standard measure in discussions of compensatory mitigation as it relates to the national no overall net loss policy. This is primarily due to the difficulty in finding one standard for quantifying the different functional components considered during the evaluation of the ecological and physical parameters required for decision-making. The use of an accounting system based on credits and debits allows the program to demonstrate comparability of the mitigation being required for authorized impacts. The terms may change as methods and techniques evolve to better describe the relationship between an adverse effect and the compensatory mitigation required to offset or reduce that adverse effect. Nevertheless, the concepts embodied in the guidance below are intended to fully support the national no overall net loss policy for wetlands and to provide a basis for formulating decisions that will more effectively and fully mitigate impacts to other aquatic resources, such as flowing streams.

**b. Applicability.** This guidance applies to compensatory mitigation proposals submitted for

approval on or after the effective date of this guidance and to those in the early stages of planning or development. These policies are not retroactive for mitigation projects that have already received approval.

## **2. General Considerations.**

All mitigation required by the Corps should be based on a consideration of regional aquatic resource requirements. Districts should take an ecosystem approach to the formulation of compensatory mitigation projects considering the resource needs of immediate and nearby watersheds. Mitigation that includes a mix of habitats such as open water (e.g., streams) as well as wetlands and adjacent uplands is normally more ecologically sustainable.

**a. Debit/Credit assessment.** The evaluation of adverse effects should be undertaken with a view toward being able to assign an identified debit to be offset by a credit. The method for assessing debits should be comparable to the method used for assigning credits. Corps regulatory program project managers are responsible for using district-approved methods (e.g., the Hydrogeomorphic Approach or acre-for-acre ratios) for assessing and assigning credits or debits in terms of amount, type and location. The definitions for “debit” and “credit” are provided (see attached definitions document).

**b. Role of preservation.** Credit may be given when existing wetlands and/or other aquatic resources are preserved (protected/maintained) in conjunction with establishment, restoration, rehabilitation, and enhancement activities and when it is demonstrated that the preservation will augment the functions of the established, restored, rehabilitated or enhanced aquatic resource. Such augmentation may be reflected in the amount of credit attributed to the entire mitigation project. In addition, the permanent preservation of existing wetlands and/or other aquatic resources may be authorized as the sole basis for generating credits in mitigation projects. In either case, consideration must be given to whether wetlands and/or other aquatic resources proposed for preservation perform physical, chemical and/or biological functions, the preservation of which is important to the region in which the mitigation site will be located. Aquatic areas, including wetlands, that are preserved as mitigation should also be under some documented level of threat for development, which is the case for most privately held wetlands or other aquatic areas.

**c. Inclusion of upland areas.** Credit may be given for the inclusion of upland areas occurring within a compensatory mitigation project to the degree that the protection and management of such upland areas is an enhancement of aquatic functions and increases the overall ecological functioning of the mitigation project (e.g., vegetated buffers or a mix of habitats).

**d. Vegetated buffers.** Compensatory mitigation plans for projects in or near streams or other open waters should normally include a requirement for the establishment and maintenance of vegetated buffers next to open waters on the project site. In many cases, vegetated buffers will be the only compensatory mitigation required and may be wetland, upland or a composite mix of the two. Vegetated buffers should normally consist of native species. The width of the vegetated buffers should be determined

based on documented water quality or aquatic habitat loss concerns. Vegetated buffers need not be required to be as wide as some technical literature would suggest since the literature addresses the pre-human colonization of North America. Normally, vegetated buffers will be 50 feet wide or less on each side of a stream or other open water area. All vegetated buffers should be designed to provide water quality or aquatic habitat functions (e.g., shading, habitat for animals that require aquatic and adjacent upland areas as habitat) and ecological value.

**e. Use of in-kind vs. out-of-kind mitigation.** In the interest of achieving functional replacement, in-kind compensation of aquatic resource impacts will often be appropriate. However, because compensatory mitigation decisions should take into account the functions of the aquatic environment, including wetlands, within both the landscape mosaic as well as a watershed context, out-of-kind compensation may also be appropriate. Out-of-kind compensation should be practicable and environmentally equal or preferable to in-kind compensation (i.e., of equal or greater ecological value to a particular region). However, non-tidal aquatic areas including wetlands should typically not be used to compensate for the loss or degradation of tidal aquatic areas including wetlands, nor should the reverse be true. Decisions to require or allow out-of-kind mitigation are made on a case-by-case basis during the permit evaluation process and should also consider the location (e.g., surrounding land uses). Such decisions are usually based on the amount of debits assigned to the impact site in comparison to the credits assigned to the compensatory action (e.g., loss of a degraded site associated with the restoration of a particularly vulnerable or valuable aquatic habitat type).

**f. Mitigation ratios.** The Corps regulatory program allows for the use of ratios in determining the amount of compensation required when there is a difference between the kind of aquatic resource being impacted and the kind of mitigation being required. Ratios must be based on an identifiable rationale (e.g., use of an assessment methodology, rationale based on a regional aquatic resource context, or a case-by-case rationale briefly described in the decision document). Other factors affecting mitigation ratios include temporal losses between the time of impact and the time the mitigation site achieves a fully functional level and the likelihood of mitigation success. All use of ratios should be to ensure that the underlying policy of offsetting the authorized impacts will occur.

**g. Types of compensatory mitigation.** The types of mitigation projects used in compensating for the loss of aquatic resources including wetland impacts are listed below. A definition for each type of compensatory mitigation project is provided in the attached definitions document. The current view is that restoration efforts provide the best potential for success in terms of providing functional compensation; however, each type of mitigation has utility and may be used as compensatory mitigation. When assigning credit for a particular type or mix of mitigation types within a mitigation project, the credit for the entire mitigation project should be compared to the debit(s) formulated for the impact(s) being authorized.

- 1. Establishment**

- 2. Restoration (includes re-establishment and rehabilitation)**

- 3. Enhancement**
- 4. Protection/Maintenance.**

**h. Timing of mitigation construction.** Financial and ecological considerations play important roles in mitigation project development. It is generally appropriate, in cases where there is adequate financial assurance and/or where the likelihood of success of the project is high, to allow an impact to occur before the mitigation plan is implemented. In this regard, the following minimum requirements should normally be satisfied prior to any construction in aquatic areas under an issued permit: (1) the mitigation plans have been approved; (2) the mitigation project site has been secured; (3) a permanent source of adequate water is available; and (4) the appropriate financial assurances have been established. In addition, initial physical and biological improvements should typically be completed no later than the first full growing season following impacts to the aquatic environment by issuance of a permit. If that is not practicable, then additional compensatory mitigation or other measures that reduce the risk of failure should be considered as part of the mitigation plan (e.g., use of a higher mitigation ratio or increased financial assurance). For compensatory mitigation involving in-lieu-fee arrangements or mitigation banking agreements, the guidance applicable to those forms of mitigation must be followed. After-the-fact mitigation may be required where permits are issued in response to emergencies or to resolve an enforcement action. If a mitigation project is implemented and documented to be successful before the impacts occur from an authorized project, the mitigation ratio necessary to offset the authorized impacts could be reduced, because there would be no temporal loss or risk for the success of the mitigation.

**i. Watershed/holistic approach for mitigation.** Increasingly, the Corps is taking a watershed approach in the regulatory program. Mitigation projects are most successful if a holistic approach is taken where a variety of aquatic resource types are protected in a mitigation project (whether mitigation bank, in-lieu fee, or project-specific mitigation), including open water, wetland and upland mixes. Where such mix of ecological factors is included in the mitigation, all of those features (open water, wetland, and upland resources which add to the aquatic functions) should be included in the “credits” established.

### **3. Compensatory mitigation project development**

**a. Compensatory mitigation plans.** The compensatory mitigation plan should describe in detail the physical, biological and legal characteristics of the project, and how the project will be established and operated. Compensatory mitigation proposals submitted with permit applications or nationwide permit pre-construction notices may be either conceptual or detailed depending on how much mitigation credit is needed to ensure the project has minimal impact to the aquatic resource and depending on the reliability of the parties implementing the mitigation to successfully follow through on the effort. However, careful consideration of each component should ensure consistency and enforceability of mitigation plans.

At a minimum, the components listed below should be considered and included in the mitigation plan and/or special permit conditions. A definition for each component is provided in the attached definitions document.

1. **Baseline Information;**
2. **Goals of the Mitigation;**
3. **Mitigation Work Plan;**
4. **Success Criteria;**
5. **Monitoring Plan;**
6. **Contingency Plan;**
7. **Site Protection;**
8. **Financial Assurances;**
9. **Responsible party for long-term maintenance.**

**b. Siting compensatory mitigation projects.** The selection of a site for a compensatory mitigation project requires consideration of numerous factors including, but not limited to, the following:

**1. Geographic location.** A mitigation project should generally be located within the area (e.g., watershed, county) where a project can reasonably be expected to provide appropriate compensation for the impacts to aquatic resources, including wetlands, under consideration. Mitigation in nearby watersheds may be appropriate and the rationale for this determination should be provided in the mitigation plans. The further removed geographically from the authorized impact the mitigation site is located, the more care must be taken to ensure that the mitigation will reasonably offset the authorized impacts. Ratios should generally increase as the distance between the impact and mitigation sites increase.

**2. Air traffic.** Compensatory mitigation projects that have the potential to attract waterfowl and other bird species that might pose a threat to aircraft should not be sited within the limits specified by the Federal Aviation Administration Advisory Circular on Hazardous Wildlife Attracts on or near Airports (AC No: 150/5200-33, 5/1/97) currently 10,000 feet from the airport and 5 statute miles if the attractant may cause hazardous wildlife movement into or across the approach or departure airspace.

**c. Use of off-site compensatory mitigation vs. on-site compensatory mitigation.** The Corps will carefully consider the use of off-site mitigation, particularly for habitat mitigation such as many wetland mitigation projects. This is particularly important when there is no practicable opportunity for on-site compensation, or when use of an off-site mitigation project is environmentally preferable to on-site mitigation. The 2001 NRC report on mitigation in the Corps Regulatory Program found that on-site mitigation may not be appropriate because of hydrologic alterations and development on-site which could compromise the quality of the mitigation. On-site mitigation is appropriate for vegetated buffers adjacent to open waters and water quality features such as storm water ponds.

**d. Agency roles and coordination.** The Corps will often choose to coordinate proposed mitigation plans with the Environmental Protection Agency, the U.S. Fish & Wildlife Service, the National Marine Fisheries Service, and/or the Natural Resources Conservation Service for technical adequacy. In addition, it is appropriate for representatives from tribal, state, and local regulatory and resource agencies

to participate where an agency has authorities and/or mandates directly affecting or affected by the establishment, use or operation of a project. The opportunity for interagency review of the mitigation plan should be commensurate with the form of authorization being contemplated and the scope of the mitigation requirement (e.g., most nationwide permit compensatory mitigation plans only require review by the Corps). In all cases, however, the Corps will determine the amount and type of compensatory mitigation required by the permit to offset the impacts to be authorized, taking into consideration the other agencies' comments. Tribal, state and local rules and/or laws may independently require more or less mitigation than the Corps requires, but those rules or laws have no legally binding effect on the Corps (unless incorporated as a condition of a Section 401 water quality certification or comparable legal document)

**e. Public review and comment.** The public should be notified of, and have an opportunity to comment on, all proposed mitigation bank or in-lieu-fee arrangements during the development process. Compensatory mitigation projects associated with standard permit applications should be made available for public comment to the extent practicable within the evaluation process (i.e., if the applicant provides a mitigation plan with the application it should be included in the public notice). However, a mitigation plan is not required for issuance of a public notice. If the mitigation plan is detailed, a synopsis may be included in the public notice and detailed plans made available for inspection at the office. For forms of authorization other than standard permits, the opportunity to comment should be based on the scope and potential for impacts to the aquatic resource.

**f. Role of the permit applicant.** Permit applicants may propose the use of mitigation banks, in-lieu fee arrangements, or separate activity-specific compensatory mitigation projects. For individual permits, the Corps will accept the applicant's proposed mitigation if the Corps determines that the proposed mitigation is appropriate and sufficient (i.e., in or reasonably close to the impact area watershed and sufficient to offset the impacts on a functional basis). For regional general permits associated with Special Area Management Plans or other watershed planning tools, the Corps can identify specific mitigation requirements (e.g., mitigation bank or in lieu fee arrangement). This approach allows the Corps to take a watershed approach in regulating and mitigating impacts.

**g. Party responsible for compensatory mitigation project success.** All permits that require compensatory mitigation will contain a provision that specifies the party responsible for planning, accomplishing and maintaining the mitigation project. The Corps, in accordance with the success criteria established for the project, will make the determination of project success.

#### **4. Management of compensatory mitigation project sites.**

##### **a. Management and protection.**

**1. Real estate interests.** The wetlands, uplands and/or other aquatic resources in a mitigation project should be permanently protected with appropriate real estate instruments (e.g., conservation easements, deed restrictions, transfer of title to Federal or state resource agencies or non-profit conservation organizations). The Corps may require third party monitoring if necessary to insure permanent protection. In no case will the real estate provisions require a signature by a Corps official. Also, the Corps cannot hold deed restrictions on any property. The real estate provisions will not commit the Corps to any interest in the property in question, unless proper statutory authority is identified that authorizes such an arrangement.

**2. Funding.** The permittee or party responsible for accomplishing and maintaining the mitigation project, including contingency funds for adaptive management, is responsible for securing adequate funds to accomplish those responsibilities associated not only with the development and implementation of the project, but also its long-term management and protection.

**3. Enforcement.** All mitigation required by Corps permits is permanent unless otherwise noted in the permit document. The Corps may take enforcement action even after the identified monitoring period has ended.

**b. Monitoring requirements.** The permittee or the party responsible for accomplishing and maintaining the mitigation project is responsible for monitoring the mitigation project in accordance with monitoring provisions identified in the project plan. Monitoring plans and the frequency of reporting will be designed to allow the Corps to determine the level of success and identify problems requiring remedial action. Monitoring will be required for an adequate period of time, normally 5-10 years, to ensure success.

**c. Remedial action.** The project plan should stipulate the general procedures for identifying and implementing remedial measures on a mitigation project. The Corps will determine the need for remediation.

**5. Duration.** This guidance remains effective unless revised or rescinded.

FOR THE COMMANDER:

Encl

/signed/  
ROBERT H. GRIFFIN  
Brigadier General, U.S. Army  
Director of Civil Works

## Definition of Terms

**1. Baseline Information:** The mitigation plan should include a written statement which defines the location, size, type, functions and amount of debit associated with the aquatic and other resources to be impacted and the amount of credit resulting from the mitigation project. This baseline information should include a description of the location of the proposed mitigation site in relation to the aquatic resource area to be impacted. Baseline information may include quantitative sampling data for both the proposed mitigation site and the project impact area. In addition, the size (e.g., acreage of wetlands, length and width of streams) and timing of the mitigation should be articulated clearly.

**2. Goals of the mitigation:** The mitigation plan should include a written statement of environmental goals and objectives. The goals should discuss the aquatic resource type (e.g., Hydrogeomorphic (HGM) class of wetlands or Rosgen class for streams) and the functions of the aquatic resources anticipated to be impacted and to be developed at the mitigation site(s). For example, for tidal wetlands, mitigation may be designed to replace lost finfish and shellfish habitat, lost estuarine production, or lost water quality functions associated with tidal backwater flooding.

**3. Resource Comparison:**

**a. Credit.** A unit of measure (e.g., functional capacity units in HGM) representing the gain of aquatic functions at a compensatory mitigation site; the measure of function is typically indexed to the number of acres of resources restored, established, enhanced, rehabilitated or protected/maintained as compensatory mitigation.

**b. Debit.** A unit of measure (e.g., functional capacity units in HGM) representing the loss of aquatic functions at an impact or project site; the measure of function is typically indexed to the number of acres lost or impact by issuance of the permit.

**4. Mitigation Work Plan:** The mitigation work plan should include detailed written specifications and descriptions of the work to be performed, including, but not limited to:

**a.** Boundaries of proposed restoration, establishment, enhancement, rehabilitation or protected/maintained areas (e.g., maps and drawings);

**b.** Replacement ratios developed consistent with the known difficulty and risk of replacement. The risk of mitigation failure is greater where the source and frequency of hydrology are uncertain and/or where a greater plant diversity is required. Therefore, these mitigation projects may require a higher ratio than those aquatic systems with greater predictability;

**c.** Construction methods, timing and sequence;



- d. Data indicating historic and existing hydrology, stream bottom and/or soil conditions;
- e. Source of water supply and connections to existing waters and proximity to uplands. In some areas, a water budget may also be necessary;
- f. Elevations of existing ground at mitigation site;
- g. Plant materials and scheme for planting;
- h. Methods and times of year for planting;
- i. Plans for control of exotic vegetation;
- j. Elevation(s) and slope(s) of the proposed mitigation area to ensure they conform with required elevation for target plant species. Survey data indicating final elevations of the area(s) to be planted should be provided prior to commencement of planting;
- k. Erosion control measures to prevent upland erosion into site are indicated;
- l. Stream or other open water geomorphology and features such as riffles and pools, bends, deflectors, etc.;
- m. A plan outlining the short and long term management and maintenance of the mitigation site.

**5. Ecologically based success criteria:** Written criteria will be developed to measure success of the compensatory mitigation and included in the permit. The success criteria will be used to determine if the mitigation is in compliance with the terms and conditions of the permit. The criteria may set specific quantitative measurements that must be met (e.g., a minimum duration of soil saturation based on groundwater well data, 80 percent vegetative cover by target species by the end of the second growing season). The criteria can also be based on reference sites and should provide the flexibility necessary to allow, when environmentally desirable, unanticipated changes (e.g., natural stream channel adjustments or long-term drought conditions). This flexibility is critical because mitigation projects do not benefit from continuous requirements to replant target species that cannot survive in the restored, established or enhanced aquatic area as designed. Changing plant species or the physical design parameters should be undertaken early in the mitigation phase when remediation is required. Criteria for the operation of mitigation sites should be based on the following (the detail will depend on the size and ecological importance of the mitigation area):

- a. Consider the hydrogeomorphic and ecological landscape and climate. Because landscapes have natural patterns that provide for sustainable levels of functions of individual aquatic areas including wetlands, permittees should locate mitigation sites in the comparable hydrogeomorphic class and/or the

appropriate landscape setting. Sites with nearby wetlands will have natural recruitment sources for plants and animals resulting in more overall sustainability.

**b.** Adopt a dynamic landscape perspective. Mitigation site locations should be made resilient to disturbances that occur in the surrounding landscapes by, for example, preserving large buffers and connectivity to other aquatic areas and tapping into surrounding natural processes and energies.

**c.** Restore or develop naturally variable hydrological conditions. The hydrology of naturally occurring wetlands and other aquatic areas often fluctuates in water level, flow distribution, and frequency and this variability should translate to mitigation sites. Preferably, hydrology should be restored without reliance on human intervention (e.g., pumping water) that requires continual maintenance.

**d.** Whenever possible, choose restoration over establishment. Restoration generally is more feasible and sustainable than establishment and has a greater likelihood of success. Restoration includes rehabilitation (e.g., removal of a chronic source of sediment to a stream with an excessive bedload).

**e.** Avoid over-engineered structures. Mitigation projects should be designed to require minimal long-term maintenance.

**f.** Pay particular attention to appropriate planting elevation, depth, soil type and seasonal timing and depth, duration and timing of water delivery.

**g.** Provide appropriately heterogeneous topography. Microtopography and topographic variation are needed to promote appropriate hydroperiods that plants and animals depend on for survival. Use adjacent or nearby natural systems as models for aquatic elevations and flooding regimes. Require as-built survey data from sites where changes in topographic elevations are proposed as part of the mitigation plan.

**h.** Pay attention to subsurface conditions, including soil and sediment geochemistry and physics, soil compaction, groundwater quantity and quality, and infaunal communities. An understanding of soil permeability, texture and stratigraphy is needed before mitigation takes place. Also, the chemical structure of soils, surface water, groundwater and tides will affect the long-term outcome of a mitigation site. If practical, use the topsoil from the impacted wetlands for construction of the new wetland, as it will contain a hydrophytic vegetation seed bank.

**i.** Consider complications associated with wetland and other area establishment or restoration in seriously degraded or disturbed sites. Disturbances associated with degraded wetlands in developed areas (e.g., subdivisions) can result in the extensive invasion by exotic

species requiring active long-term management to support native species and maintain natural processes.

**j.** Require early monitoring as part of adaptive management. Mitigation should incorporate a monitoring program that provides early indications of problems such as exotic plant infestations integrated with an adaptive management process.

**k.** Take a holistic watershed approach when requiring mitigation. Typically, a mix of habitats, including not only wetlands, streams and other open waters but also uplands, should be considered.

**6. Contingency Plan:** A contingency plan should be provided to allow for mid-course corrections, if necessary. A performance bond will be considered and implemented if appropriate.

**7. Site Protection:** A written discussion of the means of protecting the mitigation area(s) will be developed and the permit conditioned accordingly. Methods include, but are not limited to, conservation easements, deed restrictions, preservation areas, etc. Generally, conservation easements held by state or local government, other Federal agencies such as the Fish and Wildlife Service, or non-governmental groups such as The Nature Conservancy or land trusts, are preferable to deed restrictions. Using homeowner's associations as the grantee in a deed restriction or conservation easement or simply relying on rules that govern homeowner's associations has had mixed results nationwide. Consequently, homeowner's associations should be used for these purposes only in exception circumstances.

**8. Financial Assurances:** Sufficient funds or other financial assurances need to be present to cover contingency actions in the event of default by the party responsible for mitigation success or failure to meet the success criteria. Accordingly, projects posing a greater risk of failure (e.g., no naturally occurring hydrology) should have comparatively higher financial sureties in place than those where the likelihood of success is more certain. This is especially important in situations where the impacts occur prior to construction and complete functioning of the mitigation site. Financial assurances may be in the form of performance bonds, irrevocable trusts, escrow accounts, casualty insurance, letters of credit, legislatively enacted dedicated funds for government operated banks or other approved instruments. Such assurances may be phased-out or reduced, once it has been demonstrated that the project is functionally mature and/or self-sustaining in accordance with success criteria.

**9. Mitigation Types:** These are standard definitions for wetlands. Similar criteria and approaches should be used for streams and other open water areas.

**a. Establishment:** The manipulation of the physical, chemical, or biological characteristics present to develop a wetland on an upland or deepwater site, where a wetland did not previously exist. Establishment results in a gain in wetland acres.

**b. Restoration:** The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded wetland. For the

purpose of tracking net gains in wetland acres, restoration is divided into:

**1. Re-establishment:** The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former wetland. Re-establishment results in rebuilding a former wetland and results in a gain in wetland acres.

**2. Rehabilitation:** The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions of a degraded wetland. Rehabilitation results in a gain in wetland function but does not result in a gain in wetland acres.

**c. Enhancement:** The manipulation of the physical, chemical, or biological characteristics of a wetland (undisturbed or degraded) site to heighten, intensify, or improve specific function(s) or to change the growth stage or composition of the vegetation present. Enhancement is undertaken for a specified purpose(s) such as water quality improvement, flood water retention, or wildlife habitat. Enhancement results in a change in wetland function(s) and can lead to a decline in other wetland functions, but does not result in a gain in wetland acres. This term includes activities commonly associated with enhancement, management, manipulation, and directed alteration.

**d. Protection/Maintenance:** The removal of a threat to, or preventing the decline of, wetland conditions by an action in or near a wetland. Includes purchase of land or easements, repairing water control structures or fences, or structural protection such as repairing a barrier island. This term also includes activities commonly associated with the term preservation. Protection/Maintenance does not result in a gain of wetland acres.